

CLAIMS:

1. An optical disc comprising:
at least one primary track;
5 at least one alternate track; and
disc access information, stored upon the disc,
and which is read and utilized only by an optical disc
data reader, the disc access information being such as
to prevent location of the, or at least one of the,
10 primary track(s), when the disc is read by the optical
disc data reader, and to direct the data reader
instead to the, or an associated, alternate track.

2. The optical disc of claim 1, in which there
15 are a plurality of primary tracks and a plurality of
alternate tracks, at least one of the primary tracks
having an associated alternate track.

3. The optical disc of claim 2, wherein the, or
20 at least one, primary track is an audio track encoding
audio information capable of playback by a CD audio
player, and wherein the, or at least one, alternate
track is a data track encoding audio information
capable of playback by an optical disc data reader.

25 4. The optical disc of claim 3, wherein the
audio information encoded within a primary track on
the optical disc, when played back by a CD audio
player, corresponds substantially with the audio
30 information encoded within an associated alternate
track when played back by an optical disc data reader.

35 5. The optical disc of claim 3, wherein the
audio information encoded within a primary track on
the optical disc, when played back by a CD audio

player, is of different length and/or different audio content to the audio information encoded within an associated alternate track when played back by an optical disc data reader.

5

6. The optical disc of claim 2, claim 3, claim 4 or claim 5, in which each of the primary tracks has an associated alternate track.

10

7. The optical disc of any of claims 2 to 6, wherein there are m primary tracks and n alternate tracks, the disc access information indicating to an optical disc data reader that there are only m tracks in total upon the optical disc.

15

20

8. The optical disc of claim 7, wherein the disc access information further indicates to a CD-DA player that there are only m tracks in total upon the disc, the disc access information causing a different m of the $m+n$ tracks to be accessible to an optical disc data reader than the m tracks which are accessible by a CD-DA player.

25

30

9. The optical disc of claim 7 or claim 8, wherein $m \geq n$ and wherein the disc access information indicates to a CD audio player that there are m primary tracks only, and wherein the disc access information indicates to an optical disc data reader that there are n alternate tracks and $(m-n)$ primary tracks.

35

10. The optical disc of any of claims 2 to 9, wherein the disc access information is included within a table of contents (TOC) of the optical disc, the TOC having a track number indicator indicative of the

track number for each of the tracks on the disc, and wherein the track number indicator for the or each primary track which has an associated alternate track is set to zero.

5

11. The optical disc of any of claims 2 to 9, wherein the disc access information is included within a table of contents (TOC), the TOC including entries for the or each alternate track for which there is a corresponding primary track but having no entries for each such corresponding primary track.

15

12. The optical disc of any of claims 2 to 9, wherein the disc access information is included within a table of contents (TOC), the TOC including timing entries indicative of a start time for the tracks, and wherein the start time in the timing entry of at least one of the primary tracks is replaced with the start time of its corresponding alternate track.

20

25

13. The optical disc of any of claims 2 to 9, wherein the disc access information is included within a table of contents (TOC), the TOC comprising track number entries for each of the tracks on the optical disc, and wherein the track number entry or entries in the TOC for the or each primary track are swapped with the respective track number entry or entries for the or each of the corresponding alternate tracks.

30

35

14. The optical disc of any one of claims 10 to 13, wherein the TOC includes a total track quantity entry indicative of the total number of tracks upon the disc, and wherein that total track quantity entry indicates only the total number of primary tracks upon the disc.

- 25 -

15. The optical disc of claim 10 or claim 11,
wherein the track number indicator for the or each
alternate track which has a corresponding primary
track is set to indicate the track number of the
5 corresponding primary track.

16. The optical disc of any preceding claim,
further comprising substitute disc access information
10 stored upon the disc in encrypted form, the substitute
disc access information, when decrypted, being usable
by an optical disc data reader, when so decrypted, to
permit location of the primary track(s).

17. The optical disc of claim 16, further
15 comprising computer program code upon the disc and
which, when executed, causes a computer which includes
the optical disc data reader to access and decrypt the
substitute disc access information, and to cause the
optical disc data reader then to use the decrypted
20 disc access information to locate tracks upon the
disc.

18. The optical disc of claim 16 or claim 17,
wherein the substitute disc access information permits
25 location only of the primary tracks once the said
substitute disc access information has been decrypted.

19. The optical disc of claim 16, wherein the
substitute disc access information is stored upon the
30 disc as an alternate track.

20. The optical disc of any preceding claim,
wherein at least one of the alternate tracks comprises
compressed or encrypted data.

21. The optical disc of claim 20, wherein the compressed data represent an audio signal encoded to a standard such as MP3.

5 22. The optical disc of any preceding claim, in which the, or at least one of the alternate tracks, incorporates a digital rights management technique.

10 23. The optical disc of any of claims 1 to 21, in which the, or at least one of the alternate tracks, incorporates copy protection.

24. A method of generating data for writing onto an optical disc, the method comprising:

15 generating primary data representative of m primary track(s) for the optical disc ($m \geq 1$);

generating alternate data representative of n alternate track(s) for the optical disc ($n \geq 1$); and

20 assembling a table of contents (TOC) for the optical disc, the TOC containing disc access control information which, when written to an optical disc, indicates to an optical disc data reader that there are m tracks in total written upon that optical disc.

25 25. The method of claim 24, wherein the disc access control information further indicates to a CD-DA player that there are m tracks in total written upon that optical disc, the disc access information causing a different m of the $m+n$ tracks to be 30 accessible to an optical disc data reader than the m tracks which are accessible by a CD-DA player.

26. The method of claim 24 or claim 25, wherein the step of assembling a TOC comprises:

writing the generated primary and alternate data to an optical disc;

5 reading back the data thus written, including an unmodified TOC including unmodified disc access information for all of the $m+n$ tracks, to a data analysis device; and

10 editing the unmodified TOC so as to produce a modified TOC containing the said disc access control information indicative to a CD audio player of the presence of the m primary tracks, and to an optical disc data reader of the presence of n alternate tracks and $m-n$ primary tracks.

15 27. The method of claim 26, wherein the unmodified TOC further comprises a plurality of track number indicators, the method further comprising editing the unmodified TOC so as to alter the track number indicators for at least some of the primary tracks.

20

25 28. The method of claim 27, wherein the step of editing the unmodified TOC comprises setting to zero the track number indicators of those primary tracks which are to be altered, so that an optical disc data reader no longer detects the presence of the said altered primary track number indicator(s).

30 29. The method of claim 27, wherein the step of editing the unmodified TOC comprises deleting those parts of the TOC relating to at least some of the m primary tracks.

35 30. The method of claim 27 or claim 28, wherein at least one of the m primary tracks has a corresponding alternate track, the step of editing the

unmodified TOC further comprising replacing the track number indicators of each of the alternate tracks which has a corresponding primary track with the track number indicator of that corresponding primary track 5 in the unmodified TOC.

31. The method of claim 27, wherein the step of editing the TOC comprises swapping the track number indicators of at least one of the primary tracks with 10 track number indicators for a corresponding number of alternate tracks.

32. The method of claim 26, wherein the step of editing the TOC comprises replacing the start time of 15 the, or at least one of the, primary tracks with the start time of an associated alternate track.

33. The method of any one of claims 26 to 32, wherein the unmodified TOC further includes a total 20 track quantity entry, the step of editing the unmodified TOC comprising reducing the total quantity of tracks in the total track quantity entry so that it indicates, in the modified TOC, only the number of primary tracks present.

25

34. An optical disc master upon which is written or stamped data generated according to the method of any of claims 24 to 33.

30

35. An optical disc formed directly or indirectly from the optical disc master of claim 34.

35

36. An optical disc onto which data is burned, the data being generated in accordance with the method of any of claims 24 to 33.

37. A method of controlling access by an optical disc data reader to an optical disc having at least one primary track and at least one alternate track, the method comprising the step of preventing the 5 location of the, or at least one of the, primary track(s) when the disc is read by the said optical disc data reader, and directing the data reader instead to the, or an associated, alternate track.

10 38. The method of claim 37, the method further comprising allowing the location only of the or each primary track when the disc is read by a CD-DA player.

15 39. The method of claim 37 or claim 38, wherein the disc has m primary tracks ($m \geq 1$) and n alternate tracks ($n \geq 1$), the method further comprising permitting access to the n alternate track(s) and $(m-n)$ of the primary tracks when the disc is accessed by an optical disc data reader, and permitting access to the m primary tracks when the said disc is accessed by a CD- 20 DA player.